



Atty. Dkt. No. 083847-0198

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:

Percy Van Crocker et al.

Title:

Nanometer-Scale Engineered Structures, Methods and Apparatus for Fabrication thereof, and Applications to

Mask Repair, Enhancement, and Fabrication

Appl. No.:

10/689,547

Filing Date:

10/21/2003

Examiner:

Unassigned

Art Unit:

2812

INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR §1.56

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Sir:

Submitted herewith on Form PTO/SB/08 is a listing of documents known to Applicants in order to comply with Applicants' duty of disclosure pursuant to 37 CFR §1.56. A copy of each listed document, except as noted below, is being submitted to comply with the provisions of 37 CFR §1.97 and §1.98.

The USPTO has waived the requirement under 37 CFR 1.98(a)(2)(i) to submit copies of U.S. patents and U.S. patent application publications when citing and submitting an Information Disclosure Statements in a patent application filed after June 30, 2003 and in an international application that has entered the national stage under 37 USC §371 after June 30, 2003. Accordingly, copies of these types of documents are not being supplied in connection with this application. Reference is being made to Pre-OG Notice from Office of Patent Legal Administration dated July 25, 2003, Information Disclosure Statements May Be Filed Without Copies of U.S. Patents and Published Applications in Patent Applications filed after June 30, 2003.

The submission of any document herewith, which is not a statutory bar, is not intended as an admission that such document constitutes prior art against the claims of the present application or that such document is considered material to patentability as defined in 37 CFR §1.56(b). Applicants do not waive any rights to take any action which would be appropriate to antedate or otherwise remove

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as a competent reference any document which is determined to be a prima facie art reference against the claims of the present application.

TIMING OF THE DISCLOSURE

The listed documents are being submitted in compliance with 37 CFR §1.97(b), before the mailing date of the first Office Action on the merits.

RELEVANCE OF EACH DOCUMENT

All of the documents are in English.

Applicants respectfully request that any listed document be considered by the Examiner and be made of record in the present application and that an initialed copy of Form PTO/SB/08 be returned in accordance with MPEP §609.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 CFR §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741.

Respectfully submitted,

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MODIFIED PTO/SB/08 (08-00)

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O P Substitute for form 1449B/PTO		Complete if Known	
/ / INFORMATION DISCLOSURE	Application Number	10/689,547	
STATEMENT BY APPLICANT	Filing Date	10/21/2003	
	First Named Inventor	Percy Van Crocker	
Date/Submitted:	Group Art Unit	2812	
(µse as many sheets as necessary)	Examiner Name	Unassigned	
STOCKADENAN 1 of 2	Attorney Docket Number	083847-0198	

						Pages, Columns, Lines,
Examiner Initials*	Cite No.1	U.S. Patent D	Kind Code ² (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Where Relevant Passages or Relevant Figures Appear
	A1	4,200,668	,	Segal et al.	04-29-1980	. =
	A2	4,727,234		Oprysko et al.	02-23-1988	
	A3	5,126,574		Gallagher	06-30-1992	
	A4	5,294,465		Gallagher	03-15-1994	
	A5	5,674,409		Muller	10-07-1997	
	A6	5,747,120		McLean, II et al.	05-05-1998	
	A7	5,751,683		Kley	05-12-1998	
	A8	5,756,997		Kley	05-26-1998	
	A9	5,772,905		Chou	06-30-1998	
	A10	5,798,193		Pierrat et al.	08-25-1998	
	A11	5,854,487		Braunstein et al.	12-29-1998	
	A12	5,879,860		Rosolen et al.	03-09-1999	
	A13	5,948,470		Harrison et al.	09-07-1999	
	A14	6,000,947		Minne et al.	12-14-1999	
	A15	6,005,247		Baum	12-21-1999	
	A16	6,037,087		Pierrat et al.	03-14-2000	
	A17	6,057,546		Braunstein et al.	05-02-2000	
	A18	6,100,524		Yagi et al.	08-08-2000	
	A19	6,106,980		Pierrat et al.	08-22-2000	
-	A20	6,139,993		Lee et al.	10-31-2000	
	A21	6,144,028		Kley	11-07-2000	
	A22	6,165,649		Grenon et al.	12-26-2000	·
	A23	6,268,273		Kim et al.	07-31-0001	
	A24	6,270,946	B1	Miller	08-07-2001	• • • •
	A25	6,291,139		Babine et al.	09-18-2001	
	A26	6,292,382		Lewis	09-18-2001	
	A27	6,309,580	B1	Chou	10-30-2001	
	A28	6,310,342		Braunstein et al.	10-30-2001	
	A29	6,322,938	B1	Cohn	11-27-2001	
	A30	6,337,479	B1	Kley	01-08-2002	
	A31	6,353,219	B1	Kley	03-05-2002	
	A32	6,373,976	B1	Pierrat et al.	04-16-2002	
	A33	6,396,966		Lewis et al.	05-28-2002	
	A34	6,410,935	B1	Rajh et al.	06-25-2002	
	A35	6,426,499	B1	Koops	07-30-2002	
	A36	6,452,171	B1	Moloni	09-17-2002	
	A37	6,600,856		Lewis	07-29-2003	
	A38	6,635,311		Mirkin et al.	10-21-2003	
	A39	2002/0063212	A1	Mirkin et al.	05-30-2002	
	A40	2002/0122873	A1	Mirkin et al.	09-05-2002	
	A41	2003/0162004	A1	Mirkin et al.	08-28-2003	

Examiner Signature	Date Considered	
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^{*}EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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	INFORMATION	ON DISCLO	SURE	Application Number	10/689,547	
	STATEMEN'	T BY APPL	CANT	Filing Date	10/21/2003	
1.0	D-4- Cub:			First Named Inventor	Percy Van Crocker	
,	Date Submitt	ea:		Group Art Unit	2812	
•	(use as many s	sheets as ne	ecessary)	Examiner Name	Unassigned	
Sheet	2	of	2	Attorney Docket Number	083847-0198	

				U.S. PATENT DOC	UMENTS	
		U.S. Patent D	ocument			
A	42	2004/0026007	A1	Hubert et al.	02-12-2004	
Δ	\43	2004/0101469	A1	Demers	05-27-2004	

FOREIGN PATENT DOCUMENTS								
	Cite No. ¹	F Office	oreign Patent D Number4	Occument Kind Code ⁵ (if known)	Name of Patentee or Applicant of Cited Documents	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
	A44	wo	98/34092	A2	Rave, L.L.C.	08-06-1998		
	A45	wo	03/019238	A2	Aaron Lewis	03-06-2003		
	A46	wo	03/021297	A2	Aaron Lewis	03-13-2003		
	,							

		NON PATENT LITERATURE DOCUMENTS	
Examiner Initials*	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ⁶
	A47	K. LIEBERMAN et al., "Near-field optical photomask repair with a femtosecond laser", <i>Journal of Miscroscopy</i> , Vol. 194, Pt 2/3, May/June 1999, pp. 537-541.	
	A48	XUEFENG WANG et al., "Scanning Probe Contact Printing", American Chemical Society, May 17, 2003, page est: 4.6.	
	A49	AARON LEWIS et al., "Fountain pen nanochemistry: Atomic force control of chrome etching", <i>Applied Physics Letters</i> , Vol. 75, No. 17, October 25, 1999, pp. 2689-2691.	
•	A50	http://www.micromagazine.com/archive/99/10/prodact1.htm., "Machine Vision Software Improves Accuracy of Photomask Repair System", Oct. 99.	
	A51	YOUNAN XIA et al., "Unconventional Methods for Fabricating and Patterning Nanostructures", American Chemical Society, 1999, pp. 1823-1848.	
	A52	NAKAMURA, "Divot defect repair on a deep ultraviolet SiNx halftone mask", American Vacuum Society (1996), pp. 3892-3895	

Examiner	Date	
Signature	Considered	

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